(April 24, 2009) The Windy City Citizen: Nanotechnology Talk in Chicago: The Next Industrial Revolut

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Illinois nanotechnology leaders swapped ideas to spur investment in their innovations with U.S. Rep. Daniel Lipinski (D-3) Tuesday.

"I have drunk the nanotech kool-aid," Lipinski said. "I believe it's the next Industrial Revolution."

Lipinski chairs the House Science and Technology Committee's Subcommittee on Research and Science Education.

He met with local scientists and business leaders at the NanoNow Science and Technology Leadership Forum, hosted by the University of Chicago on Tuesday. Panels presented research and development in this area such as neuroprosthetics, nano fabrication of electronics and a process for converting natural gas into diamonds. Durable diamond coatings can be used to strengthen materials of many kinds.

But the nanotechnology industry faces key challenges in building the region's potential due to immigration and funding issues, according to conference participants.

Neil Kane, president of Advanced Diamond Technologies, a company that was spun off of Argonne National Laboratory, said that immigration restrictions prevented him from hiring some highly-qualified specialists.

"The immigration issue has been a continual frustration for us because, I'd say easily 70, if not 90 percent of the unsolicited resumes we get come from students, foreign students educated in the United States, but who are here on student visas and don't have...permission to stay here in the United States," Kane said. "It's a tragedy for us, it harms our competitiveness, it's ridiculous for the students. And the policy is absurd that we let people come here to absorb our knowledge and then, when they want to work productively and help build the tax base, we send them back home. It makes no sense whatsoever."

Funding remains another priority. Bret Johnson, director of Northwestern University's Homeland Security Innovation and Entrepreneurship Center, talked about the importance of the federal government's Small Business Innovation Research program. The program provides grants to small businesses to develop new technologies and products that are too risky to attract traditional investments, even by venture capitalists. The program came up for re-authorization last September but is currently funded only by continuing resolutions until the end of July.

Johnson said about $8 million worth of SBIR nanotechnology research grants in Illinois were awarded to 17 different companies over the last four years. "It's a significant amount of research dollars that come in to Illinois, and I think that just tells you why this program is beneficial to continue," Johnson said.

Lipinsky touted the fact that the House of Representatives recently passed H.R. 554, which reauthorized funding for the National Nanotechnology Initiative, a program established in 2001 to coordinate nanotechnology research across federal agencies. He said that the Senate has yet to act on the nanotechnology reathorization.

"I expect to be on the conference committee to work out the differences between the House and Senate, and I hope that by the end of the year we'll get that reauthorization passed," Lipinski said.

Johnson also proposed a state-level post for coordinating science and technology in Illinois. "I think that one of the things that can be done is to create a chief innovation officer, a chief science and technology officer in the state, whether that's a governor's office position or otherwise," Johnson said. "I think that sort of position could help rally all the resources we have in this state, and provide some fundamental guidance at the top level."

Lipinski agreed that more funding for nano research is imperative to maintain Illinois' position as a leader in the field. "I know that so much more can be done just with the research and innovation that's going on here right now," he said. "Part of the problem is that Illinois lags in private investment in nanotechnology. Our success has relied on a small but dedicated cadre of investors, working with world-class researchers, and strong nanotech centers including Argonne National Lab, and leading universities like Northwestern, the University of Chicago, and the University of Illinois. What we need right now is for leaders in academia, business, finance and politics to collaborate to do an even better job of promoting nanotech locally."